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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,562

01/23/2006

Andreas Huehsam

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EXAMINER

PARKER, FREDERICK JOHN

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,562	Applicant(s) HUEHSAM, ANDREAS	
	Examiner Frederick J. Parker	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 13, 16-28, 32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 16-28, 32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-30-08 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 12,33 are vague and indefinite because the intended meaning of the phrase "primary element of an electrical machine" is unclear, undefined, and not apparent to the skilled artisan. For examination, since the prior art coats the same types of electrical workpieces with axial stator slots, the prior art will have been considered to meet this nebulous limitation.
- Claim 33 is vague and indefinite because it contains method limitations in an apparatus claim, the limitations failing to further define the structure of the apparatus which might define patentability. MPEP 2114-2115. Applicant cannot properly claim a combination

of a device and a material worked upon, In re Hughes 49F. 2nd 478. There is no patentable combination of a device and the material upon which it works, In re Rishoi 94 USPQ 71.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 12-13,16-27,33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habsburg-Lothringen US 5540776 in view of Hopeck US 5316801 and Otani et al US 5741558 and further in view of Matsuzaki et al US 5319002.

Habsburg-Lothringen teaches a method of coating 3-dimensional grounded (i.e. “lower potential” per clm 13) electrical armature and stator workpieces (same as Applicants’ article to be coated) in a conveyor production line comprising a single closed housing (fig. 2) including a powder coating means and a cleaning means comprising suction (col. 11,18-30 and elsewhere) for removing excess or undesired coating powder from coated workpieces (col. 3, 33-44 and elsewhere), the coating means **exemplified** by an electrostatic fluidized bed but explicitly not limited thereto, the background teaching the use of spray means for powder coating such articles (col. 4, 43-52 & “Background...” section, etc). Hence the use of an electrostatic spray means instead of the exemplified fluidizing means would have been obvious because the reference itself recognizes the utility of electrostatic spraying for the same purpose with the benefit of spraying specific desired portions of the substrate. **The coating of slots in stators is cited, for example col. 13, 44-45, etc.** Such structures are the same as Applicant’s articles to be coated and since

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they are recessed would also necessarily be prone to similar Faraday Cage problems. The reference is silent on the thickness of coatings; however, Hopeck teaches a similar electrostatic spray coating of the same (epoxy) powders in which it is stated on col. 4, 14-18 **that coatings up to approximately 0.045"/1.14 mm (within Applicants' range of 1-2 mm) can be achieved before the insulating qualities of the coating material cause the thickness to become self-limiting** (same principle as Applicants, see Spec. [0009]). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the coating thickness disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. Coated workpieces are heated to cure, (Background... section and elsewhere) per claim 26. Cooling is not cited but would have been apparent to give the coated product practical commercial utility since an article at curing temperatures would not be commercially viable, per claim 27. However, details of the spraying means and particle size are not disclosed.

Otani et al teaches a high voltage electrostatic spray means (clms 18,20) for direct coating of 3-dimensional objects on conveyors without further limitation, thereby clearly capable of coating the 3-dimensional electrical workpieces of Habsburg-Lothringen. The spray means comprises a spray gun, powder source/ hopper, pressurized air pump, air regulator, etc so the pressurized air source (clm 16) is supplied and regulated which in turn regulates the powder aspirated/ drawn into the powder pump and discharged from the powder gun (clm 21,22,24,25). See col. 2, 39-61; col. 4, 46-64, fig. 1, and elsewhere. It is recognized powder spraying of 3-dimensional objects minimizes the amount of wasted coating material (as also suggested by Habsburg-Lothringen), which is an economic incentive. It is well-established that economics alone may provide

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motivation or suggestion to combine a reference, In re Clinton, 188 USPQ365. Particle size is not taught. Matsuzaki et al recognizes the need for electrostatically applicable epoxy-based powders which form thick coatings, and set forth a coating powder having particles in the range of 3-180 microns applied by an electrostatic coating gun (col. 2, 59-63) or other such means. Application of the inventive epoxy-based powders onto slots of motor armatures are cited in Example 1 (PS about 165 microns).

As to new claim 33, the combination of prior art references contain the essential limitations of the claim including a workpiece with slots and electrostatic powder spraying of particle sizes which overlap with Applicants' "coarse plastic powder" having a diameter of >150 microns. Therefore, it would have been reasonable to expect that the same phenomenon would have occurred in both Applicants' process and that of the prior art, particularly given the passage of Hopeck highlighted above, such that sufficient powder would have been deposited "within the axial slots" of the workpieces to form the coating. Thus, the prior art would have met the limitations of the claim.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Habsburg-Lothringen by incorporating the spray means of Otani et al and the known particle sizes for such spray means as taught by Matsuzaki et al to provide a thick powder coating means for 3-dimensional workpieces which provide uniform insulating films which can be applied electrostatically while reducing powder waste/ improving process economics.

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6. Claims 28,32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habsburg-Lothringen US 5540776 in view of Hopeck US 5316801 in view of Otani et al US 5741558 and Matsuzaki et al.

The previously discussed references are cited for the same reasons which are incorporated herein. Further, Habsburg-Lothringen teaches an apparatus for coating 3-dimensional workpiece in a conveyor production line comprising a single housing including a powder coating means, including sprayers, and a suction/ vacuum cleaning means for removing excess or undesired coating powder from workpieces (col. 3, 33-44 and elsewhere). The coating means is exemplified by a fluidized bed but explicitly not limited thereto, the background teaching the use of spray means for powder coating such articles (col. 4, 43-52 & “Background...” section, etc). Hence the use of a spray means instead of the exemplified fluidizing means would have been obvious because the reference itself recognizes the utility and equivalence of spraying for the same purpose with the benefit of spraying coating specific desired portions of the substrate. While details of the spraying means are not disclosed, Otani et al teaches such a spray means for coating 3-dimensional objects on conveyors without limitations, thereby clearly capable of coating the workpieces of Habsburg-Lothringen. The spray means comprises a spray gun, powder source/ hopper, pressurized air pump, air regulator, etc so the pressurized air source is supplied and regulated which in turn regulates the powder aspirated/ drawn into the powder pump and discharged from the powder gun. See col. 2, 39-61; col. 4, 46-64, fig. 1, and elsewhere. It is recognized powder spraying of 3-dimensional objects minimizes the amount of wasted coating material (as also suggested by Habsburg-Lothringen), which is an economic incentive. It is well-established that economics alone may provide motivation or suggestion to combine a

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reference, *In re Clinton*, 188 USPQ365. While particle sizes are not cited, Matsuzaki et al teaches the need for electrostatically applicable epoxy-based powders by spraying which form thick coatings, and set forth a coating powder having particles in the range of 3-180 microns applied by an electrostatic coating gun (col. 2, 59-63) as well as other electrostatic means. Application of the inventive epoxy-based powders onto slots of motor armatures are cited in Example 1 (PS about 165 microns). The Examiner notes the prior art discloses all the features of the apparatus, and that the recited method limitations do not further limit the structure of the apparatus; thus the manner or method of utilization of the apparatus machine is not germane to patentability of the apparatus itself, MPEP 2115.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Habsburg-Lothringen by incorporating the spray means of Otani et al to provide a known coating means for 3-dimensional workpieces which further provides the benefit of reducing powder waste/ improving process economics and the known particle size ranges of Matsuzaki to form thick powder coatings. It is further the Examiner's position that the limitations of Applicants claims 28 & 32 merely combine a large number of known apparatus limitations to form a coating device, wherein the features of the limitations are known in the recited art and their combination merely leads to a predictable outcome and therefore the combination of structural elements do not impart patentability because of the predictability of the outcome. The combination of familiar elements according to known methods is generally obvious when it does no more than yield predictable results, *KSR*, 127 Sup. Ct. at 1739, 2007.

Response to Arguments

Applicant's amendments and Remarks are considered; response to the amendments is included in the modified rejections above and will not be repeated for sake of brevity.

Applicant's added limitation that the axial slots form a Faraday Cage having an interior filed-free space is simply a notoriously well-known and inherent effect created by electrostatic charging. It is defined by Powder Coating: Terms & definitions (1996) as :

"A condition that may exist on a substrate due to its geometric configuration that may inhibit the electrostatic application of powder particles at that specific localized area, such as cavities or recesses."

The cited prior art recognizes such issues and uses the same solutions as does Applicants to successfully coat stator workpieces, including the slots. Thus the combination of references renders obvious the claims as presented. Applicants attempt to argue references individually, as on page 9 and 10. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants' assertion on page 11 that the powder layer thickness attained could not be attained without the use of coarse (>150 micron) powder . Example 1 of Matsuzaki expressly teaches electrostatic powder coating of resin plastic of coarse (about 165 micron) size which also successfully coated into the depths of the slots of the motor armature substrate, albeit by fluidized bed! Thus the prior art clearly discloses what Applicants claim to be their novelty for the same end-use. Since it is well-known that coarse powders may be electrostatically sprayed, the use of such powders for coating the internals of stators via spraying in the prior art becomes simply an obvious variation.

Applicants are invited to submit evidence in the form of a Declaration or equivalent to show synergistic or unexpected comparative results, to persuade this Examiner of the patentability or to arrange an interview. To date Applicants comments are simply not persuasive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Frederick J. Parker
Primary Examiner
Art Unit 1792

/Frederick J. Parker/
Primary Examiner, Art Unit 1792

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